

IN THE CLAIMS:

Please amend the claims as follows.

1-4. (Cancelled)

5. (Currently Amended) A kit used for fabricating an integrated biomolecule sensor, comprising:

an optical fiber bundle unit, which comprises a plurality of optical fibers held together at proximal ends in an ordered array with end-faces arranged substantially in the same plane and oriented substantially in the same direction, wherein core end-faces at one end of the plurality of optical fibers are configured to attach probe polymers;

a plate with wells for holding solutions containing the probe polymers with different base sequences in an ordered array; and

an auxiliary plate, which can be detachably fitted on top of the plate and has holes aligned with the corresponding wells of the plate for passing distal ends of the plurality of optical fibers therethrough into the wells having holes, wherein the respective holes corresponding to the respective wells of the plate.

6-10. (Cancelled).

11. (Currently Amended) The kit according to claim 5, wherein the optical fiber bundle unit further comprises a linker bound to the distal end of each optical fiber thereof.
12. (New) A kit used for fabricating an integrated biomolecule sensor, comprising:
  - a plurality of partial optical fiber bundle units, each of which comprises a plurality of optical fibers held together at proximal ends with end-faces arranged substantially in the same plane and oriented substantially in the same direction and which can be joined together to form a complete sensor, wherein core end-faces at one end of the plurality of optical fibers are configured to attach probe polymers;
  - a plate with wells for holding solutions containing the probe polymers in an ordered array; and
  - an auxiliary plate, which can be detachably fitted on top of the plate and has holes aligned with the corresponding wells of the plate for passing distal ends of the plurality of optical fibers therethrough into the wells.
13. (New) The kit of claim 12, wherein the auxiliary plate has a width to cover a row of wells of the plate and has holes disposed in line aligned with the corresponding wells of the plate to facilitate insertion of the distal ends of the plurality of optical fibers into the wells.
14. (New) The kit of claim 12, wherein the partial optical fiber bundle unit further comprises a linker bound to the distal end of each optical fiber.

15. (New) The kit of claim 13, wherein the partial optical fiber bundle unit further comprises a linker bound to the distal end of each optical fiber.